

REMARKS

Reconsideration of this patent application is respectfully requested in view of the foregoing amendments, and the following remarks.

The amendments to this patent application are as follows. The Specification has been amended on pages 1 and 3 in order to provide the Section Headings required by U.S. practice. The Specification has been amended on pages 1 and 2 in order to cancel out any reference to the claims mentioned thereon. The Specification has been amended on page 3 to cancel out the objected-to language "according to German Patent DE 198 22 193 A1." Also, the Specification has been amended on pages 3 and 4 in order to cancel the language "pressure valve" and to replace it by the term "piston."

The amendments to the claims are as follows.

With regard to claim 6, the Patent Examiner has stated that the use of the phrase "pressure valve" incorrectly describes the element (5) it references. The element (5) is commonly referred to in the art as a piston. Therefore, all instances in the claims and Specification that refer to element (5) as a "pressure valve" have been changed to "piston" to accurately describe the element.

In claim 6, the use of the phrase "can be" in lines 4 and 5

was objected to as being vague, as it is unclear whether the limitations that follow are actually required features of the present invention. Thus "can be" was changed to "is."

In claim 6, in line 4, "one another" could refer to any combination of the following elements: a first body, a second body and a pressure valve. However, one skilled in the art can readily understand which elements can be connected to one another.

In claim 6, in line 6, "a pressure valve" appears to be a double inclusion of "a pressure valve" in line 2. Therefore, line 6, "a pressure valve" should be changed to "the pressure valve." In point of fact, this was changed to "piston."

In claim 6, the phrase "in particular" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. Thus this phrase was cancelled.

Claim 6 recites the limitation "the adjusting force" in line 8. There is insufficient antecedent basis for this limitation in the claim. In line 8, "the adjusting force" has been changed to "an adjusting force."

In claim 6, there is the limitation "its thrust bearings" in line 10. The Patent Examiner has stated that there is insufficient

antecedent basis for this limitation in the claim. The Patent Examiner has required in line 10, "its thrust bearings" to be changed to "a plurality of thrust bearings associated with the spring mechanism." Thus this change has been made.

In claim 8, in line 4, "a thrust bearing thereof" appears to be a double inclusion of "thrust bearings" in line 10 of claim 6. Therefore, in line 4, "a thrust bearing thereof" has been changed to "the thrust bearing."

The Patent Examiner objected to claim 10 as an improper method form, which requires a method step to include an active verb, i.e. controlling. Claim 10 has been amended to recite proper method steps in the gerund form. Thus claim 10 was rewritten in independent claim format.

In claim 10, in line 5, "its" is unclear as to which element is being referenced. As presently worded, line 5 appears to state that the at least one thrust bearing is associated with the sensor. Thus "its" has been cancelled.

In claim 10, in line 5, "at least one thrust bearing" appears to indicate that the thrust bearing is capable of determining characteristic values, which only the sensor does. Claim 10 has been amended to clearly state that only the sensor determines the characteristic values.

For all the reasons set forth above, the Specification, and all the claims, are now believed to be in complete compliance with all the requirements of 35 U.S.C. 112. Withdrawal of this ground of rejection is respectfully requested.

The Applicants comment upon the prior art rejections of the claims as follows.

In the prior art *Drexel* (US Patent No. 6,540,059), the sensor 115 cited by the Examiner is not a sensor that is comparable with the sensor 4 according to the claimed invention.

In *Drexel*, the sensor serves for determining a specific position of the piston 26. This is evident, in *Drexel*, from column 10, lines 14 to 20, as well as, in particular, significantly more clearly from column 11, lines 10 to 64. In *Drexel*, the purpose of determining the position is to preclude any play that occurs due to wear, during operation of the coupling. Therefore, the sensor 115 detects that the piston 26 is in a specific starting position, in each instance, which position is assured by means of its contact with a stop.

In column 11, lines 36 ff, it is explained that the play can also be avoided by means of re-setting to even out play, in each instance.

In contrast, the present invention concerns itself with the problem of detecting the force generated in or by the spring device, while the piston is at a stop and during its movement, and of regulating the counter-force to be exerted by the piston, in each instance, using a regulation device. In the claimed invention, this difference is evident from the characterization of the sensor 4 as a sensor that determines changes in the state of a solid. From this, it is clearly evident that not a determination of position, but rather a determination of force is supposed to take place by means of the sensor according to the present invention.

By means of the aforementioned measure according to the present invention, the result is achieved that opening of the coupling can take place with precise time control. This is specifically by means of determining the force proceeding from the spring, in each instance, with simultaneous adaptation of the hydraulic counter-force acting on the piston.

Because of the differences as explained above, there is a fundamental difference when compared with the device according to *Drexel*. For this reason, not only is the claimed invention new as compared with *Drexel*, but also it can not be rendered obvious by *Drexel* in any way. This is because a person skilled in the art could not be motivated in the direction of the structure according to the invention, which is particularly advantageous. With the resulting patentability of claim 6, the dependent claims that refer

to it are also patentable.

The deficiencies in the teachings of the primary reference to *Drexel* are not overcome by the disclosure of the secondary references.

Friedrich (U.S. Patent No. 5,758,758), in column 1, lines 9 to 18, discloses an actuator cylinder for the engagement and release of the friction clutch of a motor vehicle, with a pressure chamber formed in the cylinder housing, a piston located so that it can be displaced in the pressure chamber, an actuator rod which interacts with the piston and extends out of the cylinder housing, and a device for the detection of the fully released state of the clutch disc, whereby the device is provided with a measurement element which can be automatically tracked as a function of the wear of the clutch disc.

Keeney (U.S. Patent No. 6,167,997 B1) in column 1, lines 27 to 36, discloses a clutch mechanism operable to move a sliding sleeve along a shaft between engaged and disengaged positions. The sliding sleeve would preferably move an associated clutch disk to selectively move the clutch between engaged and disengaged positions. In one embodiment of *Keeney*, the sleeve is driven by an annular motor which drives a rotary to linear transmission mechanism for driving the sleeve. In a preferred embodiment, a ball screw arrangement is utilized.

Luthje et al (U.S. Publication No. 2003/0089177 A1) in column 1, [0001] discloses generally a measuring methodology for determining state variables such as pressure, force and load of mechanical components such as e.g. machine components and tools, using amorphous carbon layers with piezoresistive properties.

For all the reasons set forth above, no prior art reference provides an identical disclosure of the claimed invention. Hence, the present invention is not anticipated under 35 U.S.C. 102. For all these reasons, all the claims are patentable under 35 U.S.C. 103 over all the prior art applied by the Patent Examiner. Withdrawal of these grounds of rejection is respectfully requested. A prompt notification of allowability is respectfully requested.

Respectfully submitted,
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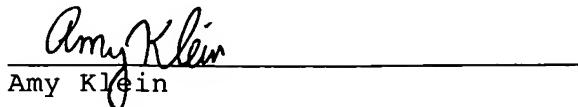


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